Exploring the Role of Development Finance Institutions in Developing Nations

A Comprehensive Literature Survey

Haider Ellalee

Oxford Institute for Economic Studies, 13-15 Magdalen St, Oxford OX1 3AE, UK

Abstract

State-sponsored Development Finance Institutions (DFIs) have emerged as pivotal actors in advancing private sector initiatives within developing regions. This paper offers an integrated review of both scholarly works and grey literature to deliver a nuanced and in-depth exploration of DFIs. The discussion is organised around five principal themes: the foundational justification for DFIs; their strategic and institutional frameworks; the tools and financial mechanisms they employ; their economic performance; and their developmental influence on both project-level stakeholders and wider communities. By shedding light on well-documented findings as well as persisting knowledge voids, this study provides valuable insights for decision-makers, field practitioners, and academic researchers alike. The conclusion outlines prospective areas for further inquiry, aiming to resolve lingering ambiguities and contribute meaningfully to ongoing debates about the evolving role of DFIs in the domain of development finance.

Keywords: Development Finance Institutions (DFIs); operational frameworks; development impact; financial instruments; developing economies.

JEL-Classification: F35, G21, H81, O16, O19

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1. Introduction

Development Finance Institutions (DFIs) are state-owned financial entities that play a direct role in supporting private sector initiatives within developing countries. In recent years, DFIs have emerged as pivotal actors in the broader development finance architecture, functioning alongside development banks, aid agencies, and governmental ministries. Although the number of DFIs remains relatively limited, the scale of their financial engagement is far from marginal. Notably, recent estimates indicate that DFIs are responsible for approximately 20% of total foreign direct investment (FDI) into the African continent (Léon, 2024). Their strategic relevance is anticipated to increase further, owing both to the growing global emphasis on private sector development in low- and middle-income countries and to the central role DFIs play in mobilising private capital flows from developed economies into these regions.

The primary objective of this paper is to consolidate key insights from existing academic literature pertaining to DFIs. The aim is to map the current state of scholarly understanding on the topic in a manner that informs both policymakers and practitioners, while also drawing attention to gaps in knowledge that may serve as foundations for future research. To this end, the paper synthesises both peer-reviewed academic sources and grey literature, comprising working papers, institutional reports, and other unpublished documents. The discussion is structured around five essential questions: (i) What justifies the existence of DFIs? (ii) Through what mechanisms do DFIs operate? (iii) What financial resources and instruments do they employ? (iv) How do they perform in terms of financial sustainability? and (v) What impacts do they generate for direct beneficiaries and broader communities? Each of these questions is examined in turn, outlining established findings as well as areas of uncertainty or incomplete evidence. The paper culminates in a discussion on potential directions for future academic inquiry within each thematic area.

This review builds upon a foundation of prior literature reviews in adjacent areas. For instance, McHugh (2021) undertakes a review of the literature on development finance and the mobilisation of private investment, primarily focusing on multilateral development banks (MDBs). His analysis spans four critical domains: the political economy of development finance, project structuring, syndication patterns, and loan pricing mechanisms. While offering valuable insights, the relevance of McHugh's findings to DFIs specifically is limited due to his emphasis on multilateral rather than bilateral or national institutions. Another contribution is by De Haas and González-Uribe (2024), who examine the effectiveness of public policy interventions aimed at improving firms' access to finance. Their study covers seven categories of financial policies, one of which includes development banks and, by extension, DFIs. However, their analysis centres solely on the impact of these institutions in alleviating credit constraints, without broader consideration of other financial or developmental outcomes. Furthermore, the geographic scope of their study includes many advanced economies, rendering the applicability of their findings to developing countries somewhat limited.

The review most closely aligned with the present paper is by Attridge et al. (2019), which explores

the development outcomes of DFI investment in terms of employment generation, income improvements, access to essential goods, and inequality reduction. Their analysis suggests that DFI investments may positively influence job creation, though evidence on other variables remains inconclusive. However, caution is warranted in interpreting these results due to limitations in the underlying studies. Of the 43 studies reviewed, 35 were directly supplied by DFIs themselves, and none were published in leading peer-reviewed economics journals as indexed by prominent sources such as the ABS Journal Ranking. Moreover, the scope of Attridge et al.'s review is narrowly focused on development impact, omitting critical aspects such as DFI governance, financial performance, and operational models, all of which are addressed in the present paper.

To the best of our knowledge, this review represents the first comprehensive scholarly synthesis offering a global perspective on the multifaceted roles of DFIs. The remainder of the paper is structured as follows: The next section offers an introductory overview of DFIs. Section 3 outlines the methodology adopted for identifying and analysing the relevant literature. Sections 4 through 8 delve into each of the five thematic questions guiding the review. Section 9 presents recommended areas for future research, and the final section concludes with key policy recommendations drawn from the literature.

2. What Are Development Finance Institutions?

2.1 General Overview of DFIs

Development Finance Institutions (DFIs) are government-owned financial organizations whose primary purpose is to facilitate private sector investment in developing and emerging economies. These institutions are essential components of international development strategies, often working alongside aid agencies and public banks. Their role is increasingly recognized in academic and policy circles due to their ability to channel resources into underserved markets and sectors.

Various definitions provided by international bodies help delineate the scope of DFIs. The Organisation for Economic Co-operation and Development (OECD) characterizes DFIs as national or international institutions—often established as subsidiaries or standalone entities—that are primarily focused on encouraging private sector activity in low- and middle-income nations. These entities typically operate under majority public ownership and are supported through capital contributions or government-backed guarantees, which enhance their financial standing. This backing enables them to borrow affordably from global capital markets and offer competitive financing to private enterprises in developing regions.

Likewise, the European Development Finance Institutions (EDFIs) describe DFIs as publicly sponsored entities that target investments in private ventures across lower-income countries. Their objectives typically align with broader development agendas, including job creation and sustainable economic advancement, contributing toward the fulfillment of the United Nations Sustainable Development Goals (SDGs).

In practice, DFIs can be divided into domestic and international categories. However, most academic analyses tend to focus on international DFIs, as many domestic ones—aside from notable examples such as Brazil's BNDES—tend to operate at a smaller scale. From a structural standpoint, DFIs may either be **unilateral**, funded and governed by a single nation, or **multilateral**, where multiple countries collaborate to establish and manage the institution. In several cases, multilateral DFIs function as private-sector arms of broader multilateral development banks (MDBs).

In terms of organizational form, some DFIs function independently with separate legal and operational mandates, while others are embedded within larger development agencies. For instance, Japan's JICA operates as a development bank but makes substantial investments in private sector ventures. Similarly, institutions like the International Finance Corporation (IFC)—an arm of the World Bank—and IDB Invest under the Inter-American Development Bank, are examples of autonomous multilateral DFIs with global or regional mandates, operating outside the main public-sector lending structures of their parent organizations.

Independent DFIs benefit from a clear operational mandate and a focused role within the broader development finance landscape. However, their autonomy also limits their scale and deprives them of the cost advantages that larger, integrated institutions enjoy. Crucially, DFIs differ from traditional development banks not only in their client base—focusing on private rather than public actors—but also in the instruments they use. Unlike development banks, DFIs generally do not provide concessional loans, thereby operating under market-oriented principles.

2.2 Additionality and Mobilisation

The operational philosophy of DFIs is grounded in two principal objectives: additionality and mobilisation of private finance. The concept of **additionality** refers to the unique value DFIs contribute beyond what private markets can deliver. Primarily, this takes the form of **financial additionality**, whereby DFIs fund projects that private investors are either unwilling or unable to support due to perceived risks or insufficient short-term returns. In this capacity, DFIs serve to expand the investment frontier in developing economies, rather than merely displacing private investment (Carter et al., 2021).

Beyond financing, DFIs aim to enhance the developmental impact of the projects they support. Their mission compels them to prioritise investments that yield significant social or economic benefits. Accordingly, DFIs often complement their financial support with non-financial contributions, such as technical assistance, knowledge sharing, or capacity building, all designed to magnify positive externalities within beneficiary communities.

In tandem with additionality, DFIs play a strategic role in **mobilising private capital, recognising** that their own resources are insufficient to meet the vast needs of developing economies. Mobilisation can occur in two ways. **Explicit mobilisation** involves direct co-investment arrangements, whereby DFIs and private investors jointly contribute to a project. **Implicit or indirect mobilisation**, on the other hand, relies on the demonstration effect. By independently undertaking pioneering investments,

DFIs aim to signal the viability of specific markets or sectors to private actors. Moreover, DFIs often absorb the initial costs and risks associated with first-time investments—thereby de-risking future ventures—and share market insights and expertise to foster private sector confidence (Collier et al., 2020; De Aghion, 1999).

2.3 Modes of Operation: Direct and Intermediated Finance

DFIs employ two principal operational approaches: **direct financing** and **intermediated financing**. In the **direct model**, DFIs allocate capital directly to non-financial corporations or specific projects. In the case of corporate finance, this may involve providing loans or equity to firms, with the choice of instrument depending on the project's risk profile, expected return, and developmental potential. In **project finance**, DFIs utilise instruments such as long-term loans, risk-sharing products, or guarantees to fund infrastructure and other large-scale initiatives.

Conversely, the **intermediated model** involves channelling funds through financial institutions—such as banks, microfinance providers, or investment funds—which then extend credit to final beneficiaries. This structure allows DFIs to scale their outreach to a broader base of small and medium-sized enterprises (SMEs) or localised projects. Financial products provided under this model often seek to reduce borrowing costs (e.g., through subsidised long-term credit) or mitigate risks (e.g., through guarantees), thereby encouraging private intermediaries to finance high-impact but otherwise underserved sectors.

Both methods aim to crowd in private investment consistent with the principles of **blended finance**, where public and private capital are combined to achieve development outcomes. In the **direct model**, DFIs often co-finance with other actors, including other DFIs, private investors, or public agencies. In the **intermediated model**, local financial partners typically blend their own resources with DFI funding to extend loans to end-users.

While both channels aim to enhance private sector development, they serve different strategic purposes. Direct financing is generally suited to large-scale projects, such as infrastructure, where DFIs typically provide multimillion-dollar commitments, though rarely exceeding 50% of total project costs. In contrast, intermediated finance allows DFIs to reach smaller enterprises, particularly those that fall below the threshold for direct investment. By working with local intermediaries, DFIs leverage their partners' superior capacity to assess borrower creditworthiness through soft information and relational lending (Liberti and Petersen, 2019).

2.4 DFIs, Development Banks, and Private Investors: Key Distinctions

Understanding the unique role of DFIs requires a comparison with both **development banks (DBs)** and **private investors**.

DFIs and DBs share a common public mandate to promote economic development and financial sustainability. Both institutions target projects capable of generating sufficient returns to be viable, while simultaneously delivering positive social or environmental impacts. However, two main

distinctions exist. First, DBs typically pursue **broader mandates**, allocating resources across both public and private sector initiatives. DFIs, in contrast, are **exclusively focused on private sector development**. In essence, DBs channel public funds for public (and private) benefit, while DFIs target private entities alone. Second, **DFIs do not provide concessional financing**, unlike DBs. Operating strictly on commercial terms helps DFIs avoid distorting market incentives and demonstrates the financial viability of investing in high-risk regions.

DFIs also differ significantly from **private investors**, despite similarities in investment structure and market-based pricing. While private actors seek to **maximise risk-adjusted financial returns**, DFIs balance profitability with **developmental objectives**. As such, DFIs can be considered a subset of **impact investors**, albeit with a public mandate.

Three core distinctions set DFIs apart from private investors. First, they prioritise projects with **high development value** that purely commercial financiers often overlook due to heightened risks or limited financial returns. Second, DFIs offer **value-added services**, including technical support and advisory assistance, to improve project outcomes and resilience. Third, DFIs are bound by **rigorous environmental, social, and governance (ESG) standards**, reinforcing their commitment to responsible and sustainable investment practices that exceed typical private sector benchmarks.

2.5 Overview of Key Data

To map the institutional landscape of Development Finance Institutions (DFIs) engaged in supporting private investment in developing economies, Table 1 brings together a list of major players compiled through a multi-source method. This effort combines data from international organizations such as the OECD and the network of European DFIs (EDFIs), and is supplemented by institutional references found in more recent academic contributions, notably Gajigo et al. (2022) and Léon (2024). The selection also includes institutions that, while not consistently classified under the DFI label—like the Japan International Cooperation Agency (JICA)—function similarly by investing in private ventures within emerging markets. Attention has also been given to institutional transformations, including the evolution of OPIC into the U.S. International Development Finance Corporation (US DFC) and the rebranding of CDC Group to British International Investment (BII).

A key insight emerging from this mapping is the dual structure of DFIs: some are operated by single countries (bilateral or unilateral DFIs), while others are governed by multiple member states (multilateral DFIs). Among the 26 organizations reviewed, 18 fall into the bilateral category, largely from high-income Western nations, while 7 are multilateral. These institutions vary considerably in their financial weight. Figure 1 reveals the significant asset concentration within the International Finance Corporation (IFC), which alone holds more than half of the total reported assets among legally independent DFIs in the sample.

A closer analysis suggests a three-level hierarchy in terms of asset volume. The IFC occupies the top tier alone. Next is the US DFC, managing around 9 percent of the aggregated assets. A third cluster includes four large bilateral DFIs—FMO (Netherlands), BII (UK), Proparco (France), and KfW-DEG

(Germany)—alongside the multilateral IDB Invest, each contributing approximately 5 to 6 percent. The remaining 11 bilateral DFIs make up the smallest tier, together holding just 6 percent of total assets. However, this framework does not account for all influential DFIs; for instance, the European Investment Bank (EIB) is frequently left out of DFI-specific datasets, despite its extensive development finance role.

Table 1: The Main Development Finance Institutions

DFI name	General information		Size & activity		
	Creation	Owner	Assets	Staff	Coverage†
Panel A: Unilateral DFIs					
US DFC	1969	USA	16,750	681	World
FMO	1970	Netherlands	10,625	661	World
BII	1948	United Kingdom	9,943	603	World
DEG	1962	Germany	8,266	573	World
PROPARCO	1977	France	8,256	457	World
NORFUND	1997	Norway	3,826	121	World
OeEB	2008	Austria	1,447	68	World
BIO	2001	Belgium	1,194	76	World
SWEDFUND	1979	Sweden	879	65	World
FINNFUND	1980	Finland	830	96	World
IFU	1967	Denmark	820	98	World
SIFEM	2011	Switzerland	771	30	World
SIMEST	1991	Italy	585	212	World
FinDev	2018	Canada	433	n.a.	World
COFIDES	1988	Spain	208	89	World
SOFID	2007	Portugal	19	10	World
CDP-DF	1991	Italy	n.a.	33	World
BMI-SBI	1971	Belgium	n.a.	n.a.	World
JICA*	1974	Japan	116,536	1,968	World
Panel B: Multilateral DFIs					
IFC	1956	World	99,010	4200	World
IDB Invest	1986	America	9,401	2000	America
EIB*	1958	Europe	607,744	4,000	World
AsDB*	1966	Asia	290,658	3687	Asia
EBRD*	1991	World	85,066	3000	Europe† and MENA
AfDB*	1964	Africa	50,840	2095	Africa
IslDB*	1975	Islamic countries (OIC)	36,400	932	OIC

Note: The "Assets" variable denotes the total asset holdings of each Development Finance Institution (DFI), expressed in constant 2022 U.S. dollars, based on data compiled by Hu et al. (2022). Information regarding staffing levels has been drawn from a combination of sources, including the European Development Finance Institutions (EDFI) and official institutional websites. However, these employment figures should be interpreted cautiously, as they are intended solely for indicative comparison. The "Owner" column identifies the sovereign stakeholders of each DFI. In instances where multiple governments hold ownership, the table consolidates and characterises the shared attributes of these stakeholders. The "Coverage" category delineates the operational scope of the client base; the designation "World" encompasses low- and middle-income nations globally, without restriction to any specific geographical region. It is important to note that DFIs marked with an asterisk (*) represent figures aggregated at the level of the entire multilateral development bank, thereby precluding direct comparison with purely bilateral DFIs. The dagger symbol (†) indicates a focus on countries in Central and Eastern Europe.

Geographic orientation is another distinguishing characteristic among DFIs. Some, particularly regional institutions, are established with mandates tied to specific member regions. This is the case for the African Development Bank (AfDB), the Asian Development Bank (ADB), the Islamic Development Bank (IsDB), and IDB Invest—all of which concentrate their operations within defined geopolitical areas. In contrast, European multilateral DFIs, such as the EIB and the European Bank for Reconstruction and Development (EBRD), though initially focused on Europe, have gradually extended activities into adjacent areas, including the Middle East and North Africa. Among all multilateral DFIs, the IFC is unique in that its operations are truly global in scope.

Although bilateral DFIs often carry global mandates in theory, their actual investment footprints tend

to follow patterns influenced by national interests, historical relationships, or foreign policy objectives. Additionally, DFIs differ significantly in how they finance their operations. While some institutions—such as FMO—raise funds through bond issuance on global capital markets, others remain more reliant on direct public transfers, government guarantees, or budget allocations. As noted by Attridge and Novak (2022), these contrasting financial strategies shape not only the scale of intervention but also the institutional flexibility and responsiveness of DFIs when operating across different regional contexts.

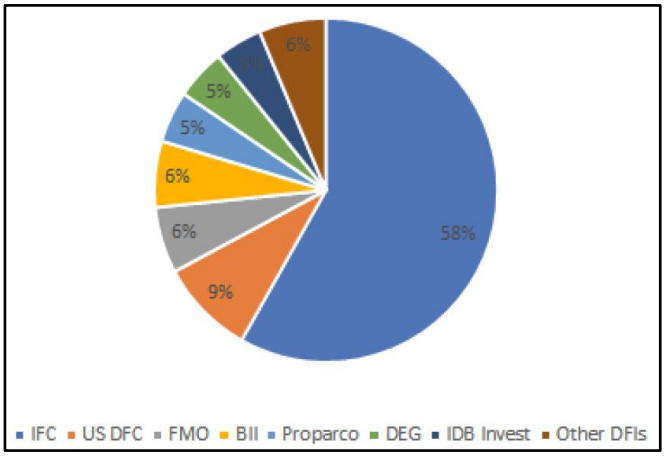

Figure 1: Development Finance Institutions Heterogeneity Size

Note: The figure illustrates the distribution of total asset holdings among a selection of legally autonomous Development Finance Institutions (DFIs), presented as a percentage of total holdings. The institutions included in this analysis comprise IFC, IDB Invest, the U.S. DFC, FMO, BII, DEG, and PROPARCO. The classification labelled "Other" encompasses a range of smaller bilateral DFIs, namely NORFUND, OeEB, BIO, SWEFUND, FINNFUND, IFU, SIFEM, SIMEST, FINDEV, COFIDES, SOFID, and CDP-FI.

Table 2: Portfolio composition of a sample of DFIs

DFI	Geography				Sector					Products		
	SSA	LAC	S. Asia	Oth.	Fin	Infra	Manuf	Agri	Oth.	Loan	Equity	Guar.
US DFC												
FMO	30	20	14	36	41	31	1	12	15	62	35	3
BII	51	0	32	17	26	41	4	7	22	25	69	6
Proparco	42	21	6	31	35	23	19	11	12	65	23	12
DEG	22	28	9	41	28	22	20	7	23	63	37	
Norfund	62	15	9	14	34	38	3	7	18	26	72	2
OeEB	16	16	14	54	41	26	7	8	18	67	30	3
BIO	40	18	18	24	40	26	4	6	24	57	43	
FINNFUND	50	10	8	32	23	22	13	26	16	40	60	
Swedfund	61	0	17	22	41	40	2		17	37	63	
IFU	34	19	17	30	33	29	9	8	21	24	75	1
SIFEM	28	18	14	40	24	17	40	4	15	27	73	
SIMEST	11	36	9	44	0	11	69	3	17		100	
FinDev	39	52		9	70	12			18	76	24	
COFIDES	17	60	2	21	42	31	16	7	4	67	33	
SOFID	56	3		41		53	30		17	100		
CDP-DF	46	28	4	22	67	5	18	3	7	76	24	

Note: Data for this analysis are derived from the European Development Finance Institutions (EDFI) database and publicly available figures from FinDev Canada's official website. The portfolio allocations are expressed as proportions of the total committed assets for each institution, as calculated by the author. These percentages reflect the relative emphasis placed on various financing instruments within each DFI's investment strategy, facilitating comparative insights into institutional focus areas and operational approaches.

3. Methodology

The central aim of this study is to provide a synthesised overview of the current academic

understanding surrounding Development Finance Institutions (DFIs). To achieve this, a **semi-systematic literature review** approach was adopted, following the framework outlined by Snyder (2019). The research process was conducted in two main stages. The first stage involved the **identification** of both published and unpublished materials—academic articles, working papers, and institutional reports—that specifically focus on DFIs. In the second stage, the materials deemed relevant were **classified** into thematic categories that structured the review and analytical framework presented in the sections that follow.

The initial identification process involved a comprehensive web-based search using **Google Scholar**. The search parameters were defined to include publications from 1990 onward and were restricted to documents with the following keywords in their titles: "DEVELOPMENT FINANCE INSTITUTION", "DEVELOPMENT FINANCE INSTITUTIONS", "DEVELOPMENT FINANCIAL INSTITUTION", "DEVELOPMENT FINANCIAL INSTITUTIONS", "DFI", and "DFIs". Abstracts (or executive summaries, in the case of institutional reports) were carefully examined to determine the initial relevance of each document.

Subsequently, a **snowball sampling technique** was employed to broaden the literature base. This involved two directions: tracing references cited within the initially selected studies and identifying newer articles that had cited these documents, again using Google Scholar as the primary tool. Each newly discovered source was subject to the same relevance screening process. Importantly, the literature search did not exclude grey literature, such as policy reports and non-peer-reviewed documents, provided they contained substantive insights on DFI activities.

Each document retained at this stage was then read in detail to assess its **analytical and scientific relevance**. This assessment was based on two criteria. First, the study had to focus explicitly on DFIs rather than on broader development finance structures. Second, the paper or report needed to exhibit **scientific rigour**, typically demonstrated through the use of structured methodologies, empirical data analysis, or theoretical contributions. Many institutional reports, especially those authored by DFIs themselves, offer useful contextual understanding and practical illustrations but lack robust empirical frameworks. Since the present review focuses on aggregating and synthesising **scientific knowledge**, the final selection was narrowed to studies and reports with **clear academic added value**.

This process resulted in a final sample of **78 publications**, a list of which can be made available upon request. For each study, a structured summary was created, including its core research questions, data sources, methodology, and key findings. These were then organised into distinct thematic categories that correspond to the main sections of the literature review. While the paper draws selectively from this pool, not all 78 publications are directly cited, as some were deemed tangential to the central analysis.

4. The Rationale and Function of Development Finance Institutions

Within the broader framework of development finance theory, Development Finance Institutions (DFIs) are conceptualized as policy-driven entities designed to address structural gaps in capital

markets, particularly within low- and middle-income countries. These gaps, often termed market failures, stem from several persistent issues: the unequal distribution of information between financial actors, the misalignment between societal benefits and individual investment returns due to externalities, and the inherently cautious, short-term focus of conventional financial intermediaries. The justification for DFI intervention in such contexts traces back to foundational work by Stiglitz (1993), who highlighted the economic inefficiencies that can arise from unregulated financial systems.

DFIs are generally positioned to absorb the informational and operational costs that deter private lenders, making them more capable of extending financing to high-impact projects that may not immediately promise commercial returns. Their mandates frequently prioritize developmental objectives over short-term financial performance, allowing them to support riskier, longer-horizon investments that serve broader socioeconomic goals (De Aghion, 1999; Eslava & Freixas, 2021). In entering markets that lack adequate financing, DFIs not only provide direct capital but also help to distribute risk more evenly throughout the investment ecosystem, enhancing overall financial stability and enabling private sector participation in previously underserved sectors (Arrow & Lind, 1970; Anginer et al., 2014).

More contemporary analyses have moved beyond this conventional rationale by positioning DFIs as **agents of discovery**, capable of recognizing and addressing failures in both markets and public policy that are not immediately evident. According to Fernández-Arias et al. (2020), the very nature of DFIs' operations places them in a unique position to uncover structural bottlenecks and institutional gaps—particularly in economies undergoing significant transformation. By engaging directly with local markets and firms, DFIs collect valuable insights that might otherwise remain unnoticed, thus contributing to a more accurate diagnosis of development constraints. In this capacity, DFIs are not just financiers but **knowledge-generating institutions**, sharing their findings with commercial stakeholders and policymakers alike. This learning function echoes the earlier conceptualization by De Aghion (1999), who described how development banks can influence investment behavior by **demonstrating the viability** of sectors or regions that are typically overlooked by conventional capital flows.

Building on this line of argument, Mazzucato and Penna (2016) propose that DFIs should evolve beyond merely correcting inefficiencies and instead adopt a **market-shaping or market-creating** role. This perspective is especially relevant in **emerging markets**, which are characterized by structural volatility, incomplete institutions, and the absence of established private sector leadership. DFIs are therefore expected to catalyse development in frontier sectors—such as **green energy, technology innovation**, or **infrastructure in fragile states**—where private capital remains largely absent. Collier et al. (2020) contribute to this debate by examining how DFIs might redesign their operating models to better address challenges in fragile environments. Their recommendations include a greater tolerance for **financial loss**, the **strategic use of concessional funding**, and an emphasis on **knowledge generation through successful pilot projects**.

Despite the growing enthusiasm for an expanded developmental role for DFIs, this vision is met with

considerable skepticism within parts of the academic literature. Critics have raised concerns regarding the **efficiency, transparency, and political independence** of these state-owned financial entities. A longstanding critique suggests that public financial institutions, including DFIs, may be **subject to political manipulation**, used strategically to further electoral goals or to benefit entities with ties to those in power (La Porta et al., 2002; Dinç, 2005). Scholars investigating this issue have sought to uncover whether **the allocation of DFI resources is systematically influenced by political dynamics or institutional affiliations**.

In one notable study, Dreher et al. (2019) conducted an empirical assessment of more than 3,000 IFC-financed projects spanning two decades (1995–2015). Their analysis revealed a **higher probability of project allocation** to countries with **board representation within the IFC**, suggesting a possible link between governance structures and lending patterns. The effect was found to be even more pronounced when **dual representation occurred**, that is, when individuals from both the donor and recipient countries sat concurrently on the institution's board. This pattern raises legitimate concerns about **political favoritism** within multilateral development operations.

Other researchers have explored the possibility of **cyclical political influence** on financial disbursements, examining how election timing might correlate with funding decisions. Bouchet et al. (2024), for example, identified both national and cross-border electoral cycles influencing the **distribution of procurement contracts** by the World Bank. Such findings suggest that development financing may be **strategically timed** in ways that correspond to political events. However, much of this literature is constrained by the **limited availability of detailed and transparent data**, particularly for smaller or national-level DFIs, which has resulted in a research bias toward large, multilateral institutions like those in the World Bank Group.

Theoretically, DFIs owned by a single state could be **more exposed to political pressure**, given the direct influence of national governments over their governance and strategy. Yet, empirical support for this proposition remains mixed. A study by Frigerio and Vandone (2020), which focused on European DFIs, found **little evidence of politically motivated lending**, with exceptions noted only in countries exhibiting **weaker democratic institutions**. This suggests that **institutional quality plays a key mediating role** in whether DFIs operate independently or are steered by political agendas. Consequently, while the **risk of political interference** in DFI operations cannot be dismissed outright, its occurrence appears to be **contingent on governance environments** and is not a universal feature of DFI behaviour.

6. Sources of Funds and Instruments

Development Finance Institutions (DFIs) differ significantly from both commercial banks and traditional development banks in terms of how they obtain capital and the financial instruments they deploy. Although DFIs primarily rely on their internally generated resources, many also supplement these funds by accessing capital markets. Surprisingly, scholarly attention to the origins and composition of DFI funding remains limited, especially regarding the role of public financial support

and implicit subsidies. In essence, DFIs often act as a conduit for transferring public resources to private sector actors, either through generalized financial advantages or through targeted project-specific support.

General subsidies include mechanisms such as preferential borrowing terms made possible by sovereign guarantees, exemptions from tax obligations, or the absence of dividend requirements—each of which represents a form of implicit fiscal support. **Project-level subsidies**, on the other hand, aim to enhance investment affordability by offering more favorable financing terms, including reduced interest rates, extended loan maturities, or grace periods. These subsidies may also come in the form of ancillary services like technical assistance or capacity-building for investee firms.

While subsidies play a significant role in the operation of Development Finance Institutions (DFIs), there remains a notable gap in empirical research quantifying their actual scale and developmental impact. A limited number of studies—such as those by Te Velde and Warner (2007) and Gower and Gower (2015)—have made preliminary efforts to estimate the fiscal cost of such support to public budgets. However, these efforts are often hampered by restricted access to granular data and rely heavily on theoretical assumptions. Carter (2015) offers a normative rationale for subsidizing private investment in developing nations, arguing that such subsidies are justifiable when public benefits clearly outweigh private returns. At the same time, he emphasizes the importance of selectivity, warning that subsidies should be allocated only to projects that genuinely require public support to proceed. This is especially challenging, as the societal value of a project is often difficult to measure and may only materialize over time. Allocating subsidies to already viable or profitable ventures would thus constitute a misallocation of public funds.

In terms of instruments, the academic literature has debated which financial tools DFIs should prioritize for maximum developmental efficiency. A commonly shared insight is that **loan guarantees extended to commercial lenders** may provide superior results in terms of both impact and fiscal prudence. De Aghion (1999) stresses that DFIs should complement financing activities with efforts to build and share market knowledge, especially when fostering innovation in nascent sectors. Co-investment arrangements with commercial banks, in her view, can promote information spillovers and reduce market hesitancy.

Other researchers, including Arping et al. (2010), have constructed moral hazard models with unobservable effort to explore optimal allocations between guarantees and co-financing. Their findings reveal that while guarantees are initially effective, there is a point at which co-financing becomes a more efficient strategy. Similarly, Hainz and Hakenes (2012) present a framework based on adverse selection that categorizes investment opportunities into three groups: those likely to attract private funding, those lacking financial and social viability, and those that are socially valuable but require financial assistance. Their model suggests that in conditions marked by significant tax inefficiencies and manageable evaluation costs, subsidized lending becomes optimal.

Eslava and Freixas (2021) offer another comparative model focused on **screening-related costs**, contrasting two policy tools: subsidized lending to banks and the provision of guarantees. Their

analysis consistently finds guarantees to be more cost-effective, as they minimize perverse incentives while limiting the burden on taxpayers. Despite this consensus, guarantees remain underutilized in practice, as indicated in Table 2.

The issue of underutilized guarantees has been critically analyzed by Pereira Dos Santos and Kearney (2018), who point to both internal policy frameworks and investor perceptions as key limiting factors. From the institutional side, guarantees are often recorded on DFI balance sheets similarly to conventional loans, thereby increasing capital adequacy requirements—even when the underlying funds are not actually deployed. This accounting treatment discourages greater use of guarantees due to the perceived financial burden. From the market perspective, private sector participants often view guarantees as overly complicated and insufficiently responsive. Specifically, they are seen as costly, administratively cumbersome, and lacking essential features such as broad risk protection, quick payout mechanisms, and streamlined negotiation processes.

Recent empirical insights provided by Flammer et al. (2024) offer further clarity on how **concessionality** is integrated into **blended finance models**, particularly in the context of the International Finance Corporation (IFC). Although DFIs publicly assert adherence to market-based investment principles, concessional financing is sometimes embedded within co-investment structures. Drawing on a dataset comprising 173 IFC co-financed projects between 2018 and 2023, the authors demonstrate that concessional funding is more frequently allocated to ventures operating in politically unstable settings or where informational asymmetries are pronounced. Additionally, projects delivering a higher ratio of environmental or social value per dollar invested tend to receive a greater degree of subsidy. These patterns suggest that concessional resources are selectively deployed to maximize developmental impact where market failures are most acute.

Attridge and Novak (2022) argue that DFIs often maintain **excess cash reserves**, indicating that these institutions could afford to expand their concessional financing activities without needing additional public capital. This inefficiency raises important questions about how subsidies should be allocated and prioritized, many of which remain unresolved within the current literature.

A smaller yet significant body of research has also examined the **relationship between DFI funding models and their investment behavior**. Accessing capital markets through bond issuance enhances DFIs' ability to scale operations and increase leverage. At the same time, this market exposure introduces financial discipline that can help insulate DFIs from political pressure, potentially increasing institutional independence. However, this autonomy comes with constraints, as DFIs must maintain high credit ratings to sustain investor confidence. As a result, they may gravitate toward more conservative, lower-risk lending strategies.

In this regard, Humphrey (2016) observes a strategic convergence among several multilateral development banks—including the World Bank, the Inter-American Development Bank (IADB), and the Development Bank of Latin America (CAF)—toward risk-averse portfolios, largely driven by the demands of capital markets. In a related study, Humphrey (2017) highlights the increasing influence of credit rating agencies, which has contributed to a shift in institutional behavior, favoring financial

soundness over risk-taking.

Further support for these observations is provided by Attridge and Novak (2022), who analyze annual reports and conduct interviews with executives from six major bilateral DFIs: BII, DEG, DFC, FMO, Norfund, and Proparco. Their findings suggest that those institutions most dependent on private capital markets—particularly FMO and Proparco—demonstrate **greater risk aversion**. In the absence of comprehensive risk disclosures, the authors rely on indirect indicators to evaluate portfolio risk—such as the proportion of equity investments (considered higher-risk), geographical focus on low-income or fragile states, and sectoral exposure (with financial services viewed as relatively safer).

7. Financial Performance

Development Finance Institutions (DFIs) operate as independent entities and are expected to maintain a baseline level of financial sustainability to ensure their continued functioning. These institutions face the dual mandate of achieving acceptable financial returns while simultaneously generating measurable development impact. Ideally, both dimensions should be analyzed concurrently through a cost-benefit framework. However, conducting such integrated assessments is methodologically complex due to data limitations and measurement difficulties.

Only a limited number of academic investigations have sought to rigorously evaluate the financial outcomes of DFIs. One persistent obstacle lies in the scarcity and inconsistency of publicly available financial data, as many DFIs fall short in transparency. Although some progress has been made in recent years, comprehensive datasets remain elusive, hindering empirical analysis. Another critical challenge involves differentiating between ex-ante expectations and ex-post results. Analysts often rely solely on observed performance metrics, which offer an incomplete picture. This gap complicates attempts to distinguish whether weaker returns are due to strategic decisions—such as targeting riskier but socially beneficial projects—or are symptomatic of internal inefficiencies, market constraints, or suboptimal management.

Some empirical studies offer valuable insights. For example, Cole et al. (2024) utilize an extensive dataset comprising more than 2,500 equity investments made by the International Finance Corporation (IFC) between 1961 and 2019. By tracking actual cash flows across the portfolio, the authors compute risk-adjusted returns and benchmark them against a public market equivalent. Their findings indicate that, at least until 2010, IFC's adjusted returns were broadly comparable to those of the S&P 500 index. However, a decline in performance was noted in the subsequent decade. The study also reveals that returns tend to diminish in more mature financial markets, suggesting that DFIs perform better in economies where capital constraints are more acute and growth opportunities are greater.

A different perspective is provided by Attridge and Novak (2022), who evaluate the financial health of six bilateral DFIs—namely BII, DEG, DFC, FMO, Norfund, and Proparco—relative to a set of peer institutions. Their research shows that overall profitability among these DFIs is modest. This underperformance is primarily attributed not to the pursuit of high-risk, low-return development projects, but rather to internal operational inefficiencies, including poor cost control and ineffective

pricing strategies. Furthermore, their analysis of institutions with available data (particularly DEG, FMO, and Proparco) uncovers notably high levels of cash reserves. This liquidity surplus suggests a cautious risk posture and implies that greater developmental impact could be achieved through more assertive capital deployment.

8. The Developmental and Economic Impact of DFIs

A critical element in evaluating the performance of Development Finance Institutions (DFIs) involves analyzing the measurable economic and social outcomes resulting from their interventions. Early investigations into this subject predominantly adopted a macro-level framework, seeking to assess the broader impacts of DFI investments on national economic indicators such as GDP expansion, employment generation, and productivity growth. One notable contribution is by Massa (2011), who conducted an extensive multi-country study covering 101 states from 1986 to 2009. This research focused on investment flows from major multilateral DFIs—namely the IFC, EBRD, and EIB—and revealed a positive link between DFI funding and national GDP performance, with especially strong effects observed in economically disadvantaged countries.

This finding is reinforced by the work of Jouanjean et al. (2015), who examined the developmental contributions of six DFIs—Proparco, IFC, EIB, EBRD, CDC, and DEG—across 62 countries between 2004 and 2009. Their analysis indicated that DFI engagement was associated with noticeable improvements in labor productivity. In further research, Massa et al. (2016) assembled a unique hand-curated dataset tracing the activities of 14 DFIs over the 1990–2014 period. While this study also confirmed a positive relationship between DFI investment and economic growth at the macro level, it reported no statistically significant impact on productivity indicators, thereby underscoring the nuanced and sometimes uneven influence of DFIs across different outcome dimensions.

Despite the promise of these macro-level assessments, they face a persistent challenge: isolating the effects of DFI interventions from other latent economic variables that also influence growth. The potential for selection bias remains, as DFIs may be more active in countries already on upward economic trajectories, making causality difficult to ascertain.

A significant body of scholarship has investigated the catalytic impact of Development Finance Institutions (DFIs), particularly their ability to crowd in private investment. In theory, the involvement of DFIs should trigger a multiplier effect, whereby every dollar they invest encourages a greater sum of private capital to flow into the same projects. Nonetheless, concerns persist over the potential for DFIs to displace private investors, resulting in a crowding-out effect. Empirical analyses aimed at quantifying the responsiveness of overall investment to DFI participation—such as those conducted by Massa et al. (2016) and Barboza and Vasconcelos (2019)—typically report a positive crowding-in relationship. However, Carter et al. (2021) raise methodological concerns, noting that even when controlling for multiple variables, endogeneity and estimation inaccuracies may distort the results.

Recent empirical research has benefited from the availability of granular data, especially in relation to syndicated loans, offering a more nuanced understanding of DFI influence. Studies by Hainz and

Kleimeier (2012), Kotchen and Negi (2019), and Gurara et al. (2020) reveal that DFIs play a pivotal role in enabling the financing of high-risk, capital-intensive projects and firms facing credit constraints. Further contributions by Degl'Innocenti et al. (2022), Broccolini et al. (2021), and Gatti et al. (2023) suggest that the crowding-in effect extends beyond project initiation, also improving access to funding in the post-construction phase. Despite these encouraging findings, blended finance instruments show limited success in the world's lowest-income settings, as highlighted by Attridge and Engen (2019). Supporting this, Mishra (2023) notes that mobilization impacts are frequently localized, benefiting select sectors or regions without generating significant cross-sectoral or international spillovers.

To assess whether DFIs fulfill the principle of additionality—that is, funding investments that would not occur otherwise—researchers have analyzed beneficiary profiles. Kenny et al. (2018b) compiled data on DFI activities from six institutions (IFC, BII, DEG, FMO, DFC, Proparco) covering 2012–2016. Similarly, Attridge and Novak (2022) reviewed the portfolios of six bilateral DFIs over 2018–2020. Both studies found a concentration of DFI funding in larger, upper-middle-income countries such as India, Turkey, South Africa, and Brazil. These findings are consistent with previous analyses by Leo and Moss (2016), Lepage (2021), and Kenny et al. (2018a), all of which noted that institutions like OPIC (now DFC) and the IFC exhibited a bias toward wealthier states. However, Dreher et al. (2019) provided a counterpoint, showing the IFC channeling greater resources to countries with limited bilateral aid access. Portfolio analyses have also examined instrument types: Attridge and Novak (2022) suggested that equity financing may have higher impact potential, although Kenny et al. (2018b) contested this, arguing that DFIs deploy equity more frequently in low-risk environments.

In recent years, scholars have turned to microeconomic and quasi-experimental methods to evaluate DFI effects on firm-level outcomes. These studies usually compare treated firms (those receiving DFI support) with control groups. Several papers—such as those by Inoue et al. (2013), Lazzarini et al. (2015), and Gomes & do Valle (2023)—analyzed Brazil's BNDES and found it particularly effective in supporting small and medium-sized enterprises (SMEs), a view consolidated in Barboza et al. (2023). In Europe, Clò et al. (2022) observed that firms receiving equity support from DFIs increased their patent activity, particularly when partnered with non-DFI investors. The effect was most pronounced in countries with strong institutional frameworks and in sectors such as green technologies and advanced manufacturing.

Other work has studied the downstream effects of intermediated lending, where DFIs channel funds through financial institutions. Cassano et al. (2013) evaluated an EBRD-backed microfinance initiative in Eastern Europe, showing that beneficiary firms experienced improved borrowing prospects, though impacts were uneven across loan sizes. Amamou et al. (2023) investigated the European Investment Bank's interventions during the 2008 crisis, finding that firms accessing EIB-supported credit exhibited stronger employment and investment growth, particularly in bank-dependent economies. Similarly, Aydin et al. (2024) assessed a gender-focused ERDB lending initiative in Turkey, concluding that women-led enterprises gained increased credit access and showed

better financial outcomes, though no community-level effects were observed due to the small scale of participating businesses.

Despite substantial investment in microfinance institutions and impact funds, little research has addressed the broader effects of such indirect support. The question of externalities—particularly whether DFI-supported firms displace others or create ecosystem-wide benefits—remains underexplored. Ru (2018) investigated the China Development Bank's lending to state-owned enterprises (SOEs), finding that while SOEs benefitted significantly, private firms in similar sectors experienced declines in sales, employment, and productivity, though downstream industries saw gains. Overall, the net effect was negative, driven by crowding-out. Léon (2024) expanded on this issue in the African context, analyzing 900 projects and concluding that DFI-supported banks reduced credit provision to non-targeted clients due to operational strain and limited institutional capacity. These results contrast with earlier work by Paravisini (2008), which found that on-lending initiatives by the Inter-American Development Bank stimulated credit growth in Argentina.

The environmental and social implications of DFI projects are less well documented. Kotchen and Negi (2019) reviewed Global Environment Facility project data and concluded that co-financed projects outperformed non-co-financed ones, although private-led projects underperformed. Probst et al. (2021) evaluated a renewable energy program in Uganda backed by KfW and the Ugandan government. Their findings confirmed that the supported hydropower projects reduced power outages and demonstrated financial additionality. However, the literature remains limited in assessing the long-term environmental footprint of such investments.

Finally, Ganson et al. (2023) explored a novel dimension—the socio-political repercussions of DFI operations. By applying a matched-sample approach to IFC projects between 1994 and 2022, the study linked DFI activity to an uptick in localized armed conflict. Projects that were large and capital-intensive were especially prone to conflict, likely due to rent-seeking behavior and competition over resources.

9. Directions for Future Inquiry

Although the existing body of scholarship provides considerable insight into Development Finance Institutions (DFIs)—including their purpose, organizational design, financial instruments, operational outcomes, and developmental impact—numerous knowledge gaps remain unaddressed across each of these domains.

To begin with, the shifting global landscape—marked by the escalating climate crisis, growing geopolitical divisions, and macroeconomic uncertainty—warrants a critical reassessment of DFIs' core mandates. A central question is whether DFIs can reconcile two potentially divergent roles: acting as development agents that catalyze private sector activity in low- and middle-income countries, while simultaneously serving as exemplary actors for other investors to emulate. These institutions benefit from explicit and implicit public support mechanisms—ranging from financial subsidies to political endorsements—which distinguish them from traditional private financiers. This

unique positioning raises concerns about the validity of DFIs serving as reference points for market actors. Furthermore, their operations may be influenced by national industrial strategies, particularly in times of fiscal retrenchment among donor countries. These tensions have important ramifications for the strategic choices DFIs make, particularly in their use of concessional tools or deployment of public funds.

Secondly, much remains unknown about the internal functioning of DFIs. Empirical research into their organizational frameworks, governance mechanisms, decision-making incentives, and procedural norms is still nascent. Understanding how these internal factors shape external behavior—such as investment preferences, risk tolerance, and impact orientation—would shed light on institutional effectiveness. There is also scope to explore how environmental sustainability considerations are embedded into DFI operations, and to what extent their lending criteria may inadvertently exclude smaller firms or those located in less developed regions. Moreover, the influence of digitalization on DFI procedures and monitoring practices is another underexplored area with considerable relevance.

Thirdly, research on the business models underpinning DFIs remains thin. Future investigations should focus on the implications of different funding structures—whether sourced from capital markets, public budgets, or hybrid mechanisms—on institutional strategy and risk-taking behavior. One line of inquiry could assess whether enhanced access to global financial markets encourages more proactive and innovative investment strategies. Another valuable area would be to analyze how DFIs can structure both sides of their balance sheet to mobilize greater volumes of private capital through mechanisms such as guarantee schemes, mezzanine finance, or impact-linked instruments.

Fourth, while attention to DFI performance is growing, rigorous evaluations remain limited. Current metrics often focus on financial returns, which may not fully reflect DFIs' development-oriented missions. Comparing DFIs to commercial investors risks mischaracterization, given their distinct objectives and operational mandates. Therefore, more granular data—disaggregated by sector, region, and instrument type—should be utilized to develop performance benchmarks that consider both developmental and financial dimensions. Portfolio-level analyses that explore diversification strategies, risk-return trade-offs, and sectoral exposures could also yield valuable insights.

Fifth, the literature on DFIs' impact, though expanding, leaves room for significant advancement. Future studies should focus more explicitly on low-income and fragile states, which remain underrepresented in current analyses dominated by middle-income contexts like Turkey, Brazil, China, and parts of Eastern Europe. Furthermore, scholars should move beyond average treatment effects and adopt methodologies that capture heterogeneity in project types, financing instruments, and firm characteristics. Another essential area involves assessing the indirect or spillover effects of DFI interventions on non-beneficiary firms. While some enterprises may suffer from competitive disadvantages due to preferential DFI support for their peers, others may benefit from ecosystem-wide enhancements. Exploring value chain effects—both upstream and downstream—could provide a more holistic view of developmental impact. Additionally, further exploration of DFIs' social,

environmental, and political outcomes is essential to forming a comprehensive understanding of their contributions and externalities.

such as public sector ownership and the alignment of DFIs with national policy objectives, the broader institutional relationships and influence of DFIs on systemic transformation are still underexamined. For instance, Griffith-Jones et al. (2020) argue that development banks possess the capacity not only to provide capital for sustainability-related investments but also to shape institutional norms, regulatory frameworks, and strategic direction within recipient countries. Their impact, therefore, transcends direct financing; DFIs can act as change agents that promote structural transformation through their convening power, technical assistance, and ability to influence policy environments. Unpacking these channels of influence is crucial for understanding how DFIs contribute to long-term development beyond individual project outcomes. These insights could be extended to DFIs operating in developing countries. Moreover, DFIs often co-invest in impact funds or collaborate with private intermediaries, yet very little is known about the dynamics of these partnerships. Even more obscure is the question of how DFIs relate to one another. The concept of "coopetition"—a blend of cooperation and competition—has gained traction in the strategic management literature (e.g., Bouncken et al., 2015; Bengtsson & Raza-Ullah, 2016) but has yet to be systematically applied to DFIs. Understanding how these institutions coordinate or compete could reveal structural inefficiencies or opportunities for strategic alignment.

Ultimately, progressing research on DFIs demands greater openness from the institutions themselves. Access to detailed, project-level data—as well as insights into internal processes—would enable both qualitative and quantitative research methodologies to flourish. Encouraging such transparency not only advances academic inquiry but also reinforces institutional legitimacy by fostering accountability and external learning, even when findings may be challenging in the short term.

10. Conclusion

This literature review has explored the evolving landscape of Development Finance Institutions (DFIs), encompassing their foundational purpose, operational mechanics, financial strategies, and developmental impact. It has also highlighted key scholarly contributions and proposed areas where deeper investigation is needed.

At the heart of ongoing policy debates is the question of how DFIs can more effectively fulfill their unique mandate: complementing commercial financial actors by channeling capital into developmentally impactful enterprises in lower-income and frontier markets. DFIs are expected to engage in projects that are high-risk, socially beneficial, and financially viable in the long run—yet current empirical evidence suggests they often fall short of this ideal. They are frequently more active in mature or emerging markets, tend to prioritize larger firms, and display limited risk appetite despite the implicit guarantees provided by their public ownership.

Reorienting DFIs toward high-impact operations will likely require significant institutional reforms. Policymakers must recognize that maximizing development returns may necessitate tolerating lower

financial performance or longer investment horizons. This shift is especially urgent in light of future challenges such as climate financing, sustainable infrastructure development, and private sector resilience in fragile states.

To achieve this transformation, four strategic reforms could be considered. First, internal operational frameworks must be adjusted to better align staff incentives with developmental outcomes rather than deal volumes or profit margins. This may involve recruiting expertise beyond traditional financial analysis, integrating social and environmental evaluators into core teams, and reforming compensation structures.

Second, DFIs should actively leverage their public status to absorb more risk or accept delayed returns where developmental gains are high. However, the use of subsidies—both implicit and explicit—must be transparently assessed, as their economic consequences remain poorly understood.

Third, DFIs should experiment with alternative financial tools and delivery mechanisms suited to underdeveloped markets. Rigid eligibility criteria and cumbersome procedures often deter smaller firms or entrepreneurs in fragile contexts. Tailoring instruments to these realities will be key to extending reach and impact.

Fourth, DFIs must improve their ability to catalyze private investment through innovative blended finance mechanisms. Current mobilization levels remain inadequate in both volume and distribution. Addressing this will require new incentive structures for private partners, improved risk-sharing tools, and a greater focus on transparency and outcome measurement.

In summary, DFIs possess significant potential to act as both market facilitators and development accelerators. However, realizing this potential will depend on their willingness to evolve—and on the academic community's continued scrutiny of their operations. Robust, transparent, and evidence-based research will be crucial in ensuring DFIs are equipped to meet the demands of an increasingly complex global development landscape.

Bibliography

Akintoye, Akintola, Cliff Hardcastle, Mike Beck, Ezekiel Chinyio, and Darinka Asenova. “Achieving Best Value in Private Finance Initiative Project Procurement.” *Construction Management and Economics* 21, no. 5 (2003): 461–470.

Allen, Franklin, and Douglas Gale. *Comparing Financial Systems*. Cambridge, MA: MIT Press, 2000.

Altunbas, Yener, Koray Alper, and David Marqués-Ibáñez. “Large Debt Financing: Syndicated Loans Versus Corporate Bonds.” *The European Journal of Finance* 16, no. 5 (2010): 437–458.

Amamou, Rym, Andras Gereben, and Michal Wolski. "Assessing the Impact of the EIB’s Intermediated Lending to SMEs during Funding Shocks." *Small Business Economics* 60, no. 3 (2023): 975–1007.

Arping, Stefan, Gyongyi Lóránth, and Alan D. Morrison. "Public Initiatives to Support Entrepreneurs: Credit Guarantees versus Co-Funding." *Journal of Financial Stability* 6, no. 1 (2010): 26–35.

Attridge, Samantha, Richard Calleja, Michael Gouett, and Alemayehu Lemma. *The Impact of Development Finance Institutions: Rapid Evidence Assessment*. London: Department for International Development, 2019.

Aydin, Hulya Ipek, Cagatay Bircan, and Ralph De Haas. "Blended Finance and Female Entrepreneurship." *CEPR Discussion Paper* 18763 (2024): 1–69.

Barboza, Ricardo, and Gustavo F. Vasconcelos. "Measuring the Aggregate Effects of the Brazilian Development Bank on Investment." *North American Journal of Economics and Finance* 47 (2019): 223–236.

Barboza, Ricardo, Sergio Pessoa, Fernando Roitman, and Eduardo P. Ribeiro. "What Have We Learned about National Development Banks? Evidence from Brazil." *Brazilian Journal of Political Economy* 43 (2023): 646–669.

Barclay, Michael, and Clifford Smith. “The Maturity Structure of Corporate Debt.” *Journal of Finance* 50, no. 2 (1995): 609–631.

Bengtsson, Maria, and Taslim Raza-Ullah. "A Systematic Review of Research on Coopetition: Toward a Multilevel Understanding." *Industrial Marketing Management* 57 (2016): 23–39.

Berg, Tobias, Anthony Saunders, and Sascha Steffen. “The Total Cost of Corporate Borrowing in the Loan Market: Don't Ignore the Fees.” *Journal of Finance* 71, no. 3 (2015): 1357–1392.

Berlin, Mitchell, and Jan Loyes. “Bond Covenants and Delegated Monitoring.” *Journal of Finance* 43, no. 2 (1988): 397–412.

Bertram, Philipp, Daniel Rösch, and Philipp Sibbertsen. “The Benefits and Limitations of Risk Models.” *Union Investment, Risk Management Edition* 1.11 (2012): 1–12.

Blanc-Brude, Frederic, and Roger Strange. “How Banks Price Loans to Public-Private Partnerships: Evidence from the European Markets.” *Journal of Applied Corporate Finance* 19, no. 4 (2007): 94–106.

Bonetti, Valerio, Stefano Caselli, and Stefano Gatti. “Offtaking Agreements and How They Impact the Cost of Funding for Project Finance Deals: A Clinical Case Study of the Quezon Power Ltd Co.” *Review of Financial Economics* 19, no. 2 (2010): 60–71.

Bouchet, Arthur, Lisa Chauvet, and Martin Ferry. "Foreign Aid and Power Play: Political Cycle in World Bank’s Procurement Allocation." *AidData Working Paper Series* 131 (2024).

Bouncken, Ricarda B., Johanna Gast, Sascha Kraus, and Marcel Bogers. "Coopetition: A Systematic Review, Synthesis, and Future Research Directions." *Review of Managerial Science* 9 (2015): 577–601.

Boyd, John H., and Edward C. Prescott. “Financial Intermediary Coalitions.” *Journal of Economic Theory* 38 (1986): 211–232.

Brealey, Richard A., Ian A. Cooper, and Michel Habib. “Using Project Finance to Fund Infrastructure Investments.” *Journal of Applied Corporate Finance* 9, no. 3 (1996): 25–38.

Broccolini, Chiara, Giorgio Lotti, Alessandro Maffioli, Andrea F. Presbitero, and Rodrigo Stucchi. "Mobilization Effects of Multilateral Development Banks." *World Bank Economic Review* 35, no. 2 (2021): 521–543.

Cantillo, Miguel, and Julian Wright. “How Do Firms Choose Their Lenders? An Empirical Investigation.” *Review of

Financial Studies* 13 (2000): 155–189.

Carbonara, Nunzia, Nicola Costantino, Louise Gunnigan, and Raffaele Pellegrino. “Risk Management in Motorway PPP Projects: Empirical-Based Guidelines.” *Transport Reviews* 35, no. 2 (2015): 162–182.

Carey, Mark, and Greg Nini. “Is the Corporate Loan Market Globally Integrated? A Pricing Puzzle.” *Journal of Finance* (2007).

Carter, Patrick, Nina Van de Sijpe, and Raphael Calel. "The Elusive Quest for Additionality." *World Development* 141 (2021): 105393.

Caselli, Stefano, and Stefano Gatti. *Structured Finance: Techniques, Products and Market*. Berlin: Springer, 2005.

Cassano, Federico, Karolin Joëveer, and Jan Svejnar. "Cash Flow vs. Collateral-Based Credit: Performance of Micro, Small and Medium Sized Firms in Transition Economies." *Economics of Transition* 21, no. 2 (2013): 269–300.

Chakraborty, Shankha, and Tridip Ray. “Bank-Based Versus Market-Based Financial Systems: A Growth-Theoretic Analysis.” *Journal of Monetary Economics* 53 (2006): 329–350.

Chemmanur, Thomas, and Paolo Fulghieri. “Reputation, Renegotiation, and the Choice Between Bank Loans and Publicly Traded Debt.” *Review of Financial Studies* 7 (1994): 475–506.

Clò, Stefano, Michele Frigerio, and Deborah Vandone. "Financial Support to Innovation: The Role of European Development Financial Institutions." *Research Policy* 51, no. 10 (2022): 104566.

Cole, Shawn, Martin Melecky, Florian Mölders, and Tristan Reed. "Long-Run Returns to Impact Investing in Emerging Markets and Developing Economies." *NBER Working Paper* 27870 (2024).

Collier, Paul, Neil Gregory, and Alexandros Ragoussis. "Pioneering Firms in Fragile and Conflict-Affected States: Why and How Development Financial Institutions Should Support Them." *Journal of Accounting & Finance* 20, no. 3 (2020): 2158–3625.

Corielli, Fabrizio, Stefano Gatti, and Alberto Steffanoni. “Risk Shifting Through Nonfinancial Contracts: Effects on Loan Spreads and Capital Structure of Project Finance Deals.” *Journal of Money, Credit and Banking* 42 (2010): 1295–1320.

De Aghion, Béatrice. "Development Banking." *Journal of Development Economics* 58, no. 1 (1999): 83–100.

De Haas, Ralph, and Juliana González-Uribe. "Public Policies for Private Finance." *Annual Review of Financial Economics*, forthcoming 2024.

Degl’Innocenti, Marco, Michele Frigerio, and Song Zhou. "Development Banks and the Syndicate Structure: Evidence from a World Sample." *Journal of Empirical Finance* 66 (2022): 99–120.

Delmon, Jeffrey. *Public-Private Partnership Projects in Infrastructure: An Essential Guide for Policymakers*. Cambridge: Cambridge University Press, 2017.

Denis, David, and Vassil Mihov. “The Choice Among Bank Debt, Nonbank Private Debt, and Public Debt: Evidence from New Corporate Borrowings.” *Journal of Financial Economics* 70, no. 1 (2003): 3–28.

Diamond, Douglas W. “Debt Maturity Structure and Liquidity Risk.” *Quarterly Journal of Economics* 106, no. 3 (1991): 709–737.

Diamond, Douglas W. “Financial Intermediation and Delegated Monitoring.” *Review of Economic Studies* 51, no. 3 (1984): 393–414.

Diamond, Douglas W. “Monitoring and Reputation: The Choice Between Bank Loans and Directly Placed Debt.” *Journal of Political Economy* 99, no. 4 (1991): 689–721.

Diamond, Douglas W. “Seniority and Maturity of Debt Contracts.” *Journal of Financial Economics* 33, no. 3 (1993): 341–368.

Dreher, Axel, Valentin F. Lang, and Katharina Richert. "The Political Economy of International Finance Corporation Lending." *Journal of Development Economics* 140 (2019): 242–254.

Esho, Neal, Yan-Kim Lam, and Ian Sharpe. “Choice of Financing Source in International Debt Markets.” *Journal of International Financial Markets, Institutions and Money* (2001).

Eslava, Marcela, and Xavier Freixas. "Public Development Banks and Credit Market Imperfections." *Journal of Money,*

Credit and Banking 53, no. 5 (2021): 1121–1149.

Esty, Benjamin C. “Why Study Large Projects? An Introduction to Research on Project Finance.” *European Financial Management* 10, no. 2 (2004): 213–224.

Esty, Benjamin C., and Aldo Sesia. *An Overview of Project Finance & Infrastructure Finance – 2006 Update*. Boston: Harvard Business School Publishing, 2007.

Esty, Benjamin C., and William Megginson. “Creditor Rights, Enforcement, and Debt Ownership Structure: Evidence from the Global Syndicated Loan Market.” *Journal of Financial and Quantitative Analysis* 38, no. 1 (2003): 37–59.

Fabozzi, Frank J., Henry Davis, and Moorad Choudhry. *Introduction to Structured Finance*. Hoboken: Wiley, 2006.

Fernández-Arias, Eduardo, Ricardo Hausmann, and Ugo Panizza. "Smart Development Banks." *Journal of Industry, Competition and Trade* 20 (2020): 395–420.

Finnerty, John D. *Project Financing: Asset-Based Financial Engineering*. 3rd ed. Hoboken: John Wiley & Sons, 2013.

Finnerty, John D. “Financial Engineering in Corporate Finance: An Overview.” *Financial Management* 17, no. 4 (1988): 14–33.

Fiori, Fabio, and Harald Uhlig. “Bank Finance Versus Bond Finance.” *Journal of Money, Credit and Banking* 43 (2011): 1399–1421.

Flammer, Caroline, Thibaut Giroux, and Geoffrey Heal. "Blended Finance." *NBER Working Paper* 32287 (2024).

Flannery, Mark J. “Asymmetric Information and Risky Debt Maturity Choice.” *Journal of Finance* 41, no. 1 (1986): 19–37.

Frigerio, Michele, and Deborah Vandone. "European Development Banks and the Political Cycle." *European Journal of Political Economy* 62 (2020): 101852.

Gabbi, Giampaolo, and Andrea Sironi. “Which Factors Affect Corporate Bonds Pricing? Empirical Evidence from Eurobonds Primary Market Spreads.” *European Journal of Finance* 11 (2005): 59–74.

Gajigo, Ousman, Ebenezer B. Nyantakyi, Fernand H. Kemeze, and Mohamed Bah. *Do Development Finance Institutions Put Their Funds Where Their Mandate Is?* AfDB Working Paper Series 369 (2022).

Gatti, Marco, Daniel Gorea, and Andrea F. Presbitero. *The Effect of EIB Operations on Private Sector Lending outside the European Union.* EIB Working Papers 2023/03 (2023).

Gatti, Stefano, Sabine Kleimeier, William Megginson, and Alberto Steffanoni. “Arranger Certification in Project Finance.” *Financial Management* 42, no. 1 (2013): 1–40.

Gatti, Stefano. *Project Finance in Theory and Practice: Designing, Structuring, and Financing Private and Public Projects*. Burlington: Academic Press, 2008.

Gereben, Andras, Alex Rop, Martin Petricek, and Adalbert Winkler. *Do IFIs Make a Difference? The Impact of EIB Lending Support for SMEs in Central and Eastern Europe during the Global Financial Crisis.* EIB Working Paper 2019/09 (2019).

Gomes, Mariana da Costa, and Maria R. D. do Valle. "Do Companies That Benefit from Development Banks’ Funding Invest More? New Evidence from Brazil." *Economic Modelling* 127 (2023): 106476.

Gong, Donghui, Jing Xu, and Jun Yan. "National Development Banks and Loan Contract Terms: Evidence from Syndicated Loans." *Journal of International Money and Finance* 130 (2023): 102763.

Gössinger, Alexander, Werner Raza, Andreas Gütermann, Katharina Hammler, and Nils Schaefer. *Bilateral Development Finance Institutions in Europe: A Comparative Analysis of DEG, CDC, FMO and Norfund with Recommendations for Development Policy.* ÖFSE Working Paper 29 (2011).

Griffith-Jones, Stephany, Samantha Attridge, Richard Calleja, Michael Gouett, and Alemayehu Lemma. *Securing Climate Finance through National Development Banks.* OPI Report (2020).

Grimsey, Darrin, and Mervyn Lewis. “Evaluating the Risks in Public Private Partnerships for Infrastructure Projects.” *International Journal of Project Management* 20, no. 2 (2002): 107–118.

Gurara, Daniel, Andrea Presbitero, and Mario Sarmiento. "Borrowing Costs and the Role of Multilateral Development

Banks: Evidence from Cross-Border Syndicated Bank Lending." *Journal of International Money and Finance* 100 (2020): 102090.

Hainz, Christa, and Hendrik Hakenes. "The Politician and His Banker—How to Efficiently Grant State Aid." *Journal of Public Economics* 96, no. 1–2 (2012): 218–225.

Hainz, Christa, and Stefanie Kleimeier. "Political Risk, Project Finance, and the Participation of Development Banks in Syndicated Lending." *Journal of Financial Intermediation* 21, no. 2 (2012): 287–314.

He, Qing, Lin Luo, Yahua Hu, and Albert P. C. Chan. "Measuring the Complexity of Mega Construction Projects in China—A Fuzzy Analytic Network Process Analysis." *International Journal of Project Management* 33, no. 3 (2015): 549–563.

Heckman, James. "Sample Selection Bias as a Specification Error." *Econometrica* 47 (1979): 153–161.

Houston, Joel, and Christopher James. "Bank Information Monopolies and the Mix of Private and Public Debt Claims." *Journal of Finance* 51 (1996): 1863–1889.

Hu, Bin, Andreas Schclarek, Jing Xu, and Jun Yan. "Long-Term Finance Provision: National Development Banks vs Commercial Banks." *World Development* 158 (2022): 105973.

Hu, Jian, and Richard Cantor. "The Relationship Between Issuance Spreads and Credit Performance of Structured Finance Securities." *Journal of Fixed Income* 16 (2006): 5–20.

Humphrey, Chris. "He Who Pays the Piper Calls the Tune: Credit Rating Agencies and Multilateral Development Banks." *The Review of International Organizations* 12, no. 2 (2017): 281–306.

Humphrey, Chris. "The Invisible Hand: Financial Pressures and Organisational Convergence in Multilateral Development Banks." *The Journal of Development Studies* 52, no. 1 (2016): 92–112.

Johnson, Shane. "An Empirical Analysis of the Determinants of Corporate Debt Ownership Structure." *Journal of Financial and Quantitative Analysis* 32 (1997): 47–69.

Jouanjean, Marie-Angélique, Isabella Massa, and Dirk Willem te Velde. "The Role of Development Finance Institutions in Promoting Jobs and Structural Transformation." *Development Finance Agenda* 1, no. 1 (2015): 16–21.

Kenny, Charles, Justin Kalow, and Vijaya Ramachandran. *Inside the Portfolio of the International Finance Corporation: Does IFC Do Enough in Low-Income Countries?* CGD Policy Paper 115 (2018a).

Kenny, Charles, Justin Kalow, Vijaya Ramachandran, and Ben Leo. *Comparing Five Bilateral Development Finance Institutions and the IFC.* CGD Policy Paper 116 (2018b).

Kleimeier, Stefanie, and William Megginson. "Are Project Finance Loans Different from Other Syndicated Credits?" *Journal of Applied Corporate Finance* 13 (2000): 75–87.

Kotchen, Matthew J., and Nishita K. Negi. "Cofinancing in Environment and Development: Evidence from the Global Environment Facility." *World Bank Economic Review* 33, no. 1 (2019): 41–62.

Krishnaswami, Sudha, Paul Spindt, and Venkat Subramaniam. "Information Asymmetry, Monitoring, and the Placement Structure of Corporate Debt." *Journal of Financial Economics* 51 (1999): 407–434.

Kumar, Lalit, Ankit Jindal, and Nagaraj R. Velaga. "Financial Risk Assessment and Modelling of PPP Based Indian Highway Infrastructure Projects." *Transport Policy* 62 (2018): 2–11.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Government Ownership of Banks." *The Journal of Finance* 57, no. 1 (2002): 265–301.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. "Legal Determinants of External Finance." *Journal of Finance* 52 (1997): 1131–1150.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. "Law and Finance." *Journal of Political Economy* 106 (1998): 1113–1155.

Lavasani, Seyed Morteza, Nasrin Ramzali, Farzin Sabzalipour, and Ertan Akyuz. "Utilisation of Fuzzy Fault Tree Analysis (FFTA) for Quantified Risk Analysis of Leakage in Abandoned Oil and Natural-Gas Wells." *Ocean Engineering* 108 (2015): 729–737.

Lazzarini, Sergio G., Aldo Musacchio, Rodrigo Bandeira-de Mello, and Renato Marcon. "What Do State-Owned Development Banks Do? Evidence from BNDES, 2002–09." *World Development* 66 (2015): 237–253.

Leland, Hayne. "Financial Synergies and the Optimal Scope of the Firm: Implications for Mergers, Spinoffs, and Structured Finance." *Journal of Finance* 62 (2007): 765–807.

Leo, Benjamin, and Todd J. Moss. *Inside the Portfolio of the Overseas Private Investment Corporation.* Vol. 081. Center for Global Development, 2016.

Léon, Florian. *Blended Binds: How DFI's Support Programs Stifle Bank Lending in Africa.* FERDI Working Papers P342 (2024): 1–43.

Lepage, Marie-Ève. *Les Déterminants des Investissements de la Société Financière Internationale.* PhD diss., HEC Montréal, 2021.

Levine, Ross. "Bank-Based or Market-Based Financial Systems: Which Is Better?" *Journal of Financial Intermediation* 11 (2002): 1–30.

Liberti, José M., and Mitchell A. Petersen. "Information: Hard and Soft." *Review of Corporate Finance Studies* 8, no. 1 (2019): 1–41.

Limodio, Nicola. "Bureaucrat Allocation in the Public Sector: Evidence from the World Bank." *The Economic Journal* 131, no. 639 (2021): 3012–3040.

Luna-Martinez, José, Carlos Vicente, Asad Arshad, Roxana Tatucu, and Jin Song. *2017 Survey of National Development Banks.* Washington, DC: World Bank, 2018.

Massa, Isabella, Maria M. Parra, and Dirk Willem te Velde. *The Macroeconomic Effects of Development Finance Institutions in Sub-Saharan Africa.* ODI Report, 2016.

Massa, Isabella. *Impact of Multilateral Development Finance Institutions on Economic Growth.* ODI Report, 2011.

Mazzucato, Mariana, and Caetano C. Penna. "Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks." *Journal of Economic Policy Reform* 19, no. 4 (2016): 305–326.

McHugh, Claire A. "Competitive Conditions in Development Finance." *Journal of International Financial Markets, Institutions and Money* 83 (2023): 101741.

McHugh, Claire A. "Mobilising Private Funding of Development Finance." *The Journal of Development Studies* 57, no. 12 (2021): 1979–2001.

Meng, Xianhai, and Nigel McKevitt. "Improving the Bankability of a PFI Financing Application." *The Journal of Structured Finance* 17, no. 3 (2011): 78–87.

Nevitt, Peter, and Frank Fabozzi. *Project Financing*. 7th ed. London: Euromoney, 2001.

Oyedele, Lukumon. "Avoiding Performance Failure Payment Deductions in PFI/PPP Projects: Model of Critical Success Factors." *Journal of Performance of Constructed Facilities* 27, no. 3 (2013): 283–294.

Pantelias, Andreas, and Aris Roumboutsos. "A Conceptual Framework for Transport Infrastructure PPP Project Credit Assessments." *Journal of Finance and Economics* 3, no. 6 (2015): 105–111.

Paravisini, Daniel. "Local Bank Financial Constraints and Firm Access to External Finance." *The Journal of Finance* 63, no. 5 (2008): 2161–2193.

Pereira Dos Santos, Paulo, and Mary C. Kearney. *Multilateral Development Banks' Risk Mitigation Instruments for Infrastructure Investment.* IDB Technical Note 1358 (2018).

Pinto, José, and Mário Santos. "Debt Financing Choices: Theory and Evidence from Europe." Working Paper. Accessed 2016. http://ssrn.com/abstract=2409730.

Probst, Barbara, Lars Westermann, Laura D. Anadón, and Andreas Kontoleon. "Leveraging Private Investment to Expand Renewable Power Generation: Evidence on Financial Additionality and Productivity Gains from Uganda." *World Development* 140 (2021): 105347.

Rajan, Raghuram. "Insiders and Outsiders: The Choice Between Informed and Arm's-Length Debt." *Journal of Finance* 47 (1992): 1367–1400.

Ru, Hong. "Government Credit, a Double-Edged Sword: Evidence from the China Development Bank." *The Journal of Finance* 73, no. 1 (2018): 275–316.

Smallridge, Diana, and Felipe De Olloqui. *A Health Diagnostic Tool for Public Development Banks.* IDB Technical Note 225 (2011).

Smith, Clifford, and Ross Watts. "The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies." *Journal of Financial Economics* 32 (1992): 263–292.

Smith, Nigel J., Tony Merna, and Paul Jobling. *Managing Risk in Construction Projects*. Hoboken: John Wiley & Sons, 2014.

Snyder, Hannah. "Literature Review as a Research Methodology: An Overview and Guidelines." *Journal of Business Research* 104 (2019): 333–339.

Sorge, Marco, and Blaise Gadanecz. "The Term Structure of Credit Spreads in Project Finance." *BIS Quarterly Review*, Winter 2008.

Stiglitz, Joseph E. "The Role of the State in Financial Markets." *The World Bank Economic Review* 7, suppl. 1 (1993): 19–52.

Sundberg, Mikaela. "Local Recruits in Development Finance Institutions: Relocating Global North–South Divides in the International Aid Industry." *The Journal of Development Studies* 59, no. 11 (2023): 1635–1651.

Te Velde, Dirk Willem, and Michael Warner. *The Use of Subsidies by Development Finance Institutions in the Infrastructure Sector.* ODI Project Briefing 2 (2007): 31–54.

Valipour, Alireza, Norlida Yahaya, Norsiah Md Noor, Abbas Mardani, and Jolanta Antuchevičienė. "A New Hybrid Fuzzy Cybernetic Analytic Network Process Model to Identify Shared Risks in PPP Projects." *International Journal of Strategic Property Management* 20, no. 4 (2016): 409–426.

Wibowo, Agus, and Hans Wilhelm Alfen. "Government-Led Critical Success Factors in PPP Infrastructure Development." *Built Environment Project and Asset Management* 5, no. 1 (2015): 121–134.

Xu, Yanjun, Albert P. Chan, Bo Xia, Qingke Qian, Yan Liu, and Yubing Peng. "Critical Risk Factors Affecting the Implementation of PPP Waste-to-Energy Projects in China." *Applied Energy* 158 (2015): 403–411.

Yilmaz, Kaya. "Comparison of Quantitative and Qualitative Research Traditions: Epistemological, Theoretical, and Methodological Differences." *European Journal of Education* 48, no. 2 (2013): 311–325.

Zhang, Xueqing. "Improving Concessionaire Selection Protocols in Public/Private Partnered Infrastructure Projects." *Journal of Construction Engineering and Management* 130, no. 5 (2004): 670–679.